Investigating the Organizational Climate Measure's Generalizability

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May 2009

Acknowledgements

I would like to thank all of those who have helped me complete this thesis.

Thank you to Thomas Hoff and Cato Bjørkli, my supervisors, who have helped me through the process from selecting my hypothesis to finishing the writing. I want to thank Pål Ulleberg, who has helped with all my questions regarding research methodology and Jon Anders Lone, who worked with me in planning the project as well as data collection.

In addition I want to thank Eirik Aarrestad Orvik who has helped me with my writing, and most of all, supported me trough this year.

Thanks to all those who were responsible for translating the Organizational Climate Measure to Norwegian, Per Straumsheim, Thomas Hoff, Roald Bjørklund and Sara Brotov.

A great thanks to the company and their employees that participated, without them this research project would not have been possible.

Oslo, May 2009

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Abstract

In this article the Organizational Climate Measure (OCM) by Patterson et al. (2005) is tested in the Norwegian service sector in an attempt to investigate the generalizability of the model. The questionnaire was completed by 555 employees of whom 54% were male and 46% female, the average age was 44. A confirmatory factor analysis was conducted to investigate how well the model would fit the data, and an exploratory factor analysis was executed to look for an alternative model. The results for model fit successfully replicated those of Patterson et al., and the failure to find a more suitable model for the data further supported the 17-latent factor model. The author therefore concluded in favor of the 17-latent factor model presented by Patterson et al., supporting that the OCM is a reliable organizational climate measure with good generalizability.

Organizational climate is far from a new subject, in their review article of climate research and theory James et al. (2008) refer to literature, as far back as the end of the 1950s. Today a flora of research exists linking organizational climate to several important organizational and individual outcome factors. For example, studies have shown a relationship between climate and output factors such as health and well-being of employees (Stone, Du, & Gershon, 2007), job satisfaction (Johnson & McIntye, 1998; Tsai & Huang, 2008), organizational commitment (Tsai & Huang, 2008), turnover (Glisson et al., 2008; Aarons & Sawitzky, 2006) and turnover intentions (Stone, Mooney-Kane et al., 2007). Riordan, Vandenberg and Richardson (2005) went so far as to conclude that organizational climate was related to organizational effectiveness, which they had measured by financial performance, turnover rate, and workforce morale. Organizational climate has also been shown related to more specific "on the job behavior", such as employees compliance with safety regulations (Neal, Griffin, & Hart, 2000) and detention officers' readiness to use force on inmates (Griffin, 1999). Additionally studies have indicated that organizational climate has an impact on the relationship between other variables in the work place. It has been shown to influence the relationship between HR practices and productivity (Neal, West, & Patterson, 2005) and to mediate the relationship between HR practices and customer satisfaction (Rogg, Schmidt, Shull, & Schmitt, 2001).

Organizational climate is clearly an important subject within organizational studies, and a potential important source of information for many organizations. For this reason there are also clear benefits to having a good organizational climate measure. Despite the importance of climate and the several decades with research on the subject there is still a lack of a good, universally accepted, global organizational climate measure (Patterson et al., 2005).

This article will look at the measurement instrument developed by Patterson et al. (2005) in their attempt to rectify the limitations with existing instruments. First, the following section will briefly look at how climate is defined and measured and introduce some of the problems with existing climate measures. The second section will discuss the measurement instrument in more detail, before the purpose of the study is presented.

Organizational Climate: Definition and Measurement

There exist many different, and sometimes conflicting, views on what organizational climate is (James et al., 2008; James & Jones, 1974) and how it differs from other related subjects such as culture (Denison, 1996). This article will not try to cover the diversity of these views, for further discussion on the topic see Denison (1996), James et al. (2008), James and Jones (1974), and Schneider (2000). Nevertheless, it is still important to be clear about the assumptions made about climate, because how one defines a phenomenon is essential to how one should measure it.

A commonly used description of climate refers to the employees' perceptions (or psychological meanings) of organizational events, practices, and procedures within one organization. Organizational climate are these shared perceptions of the same phenomenon (James et al., 2008; Patterson et al., 2005). By this description, climate is something measured at individual level (often by a questionnaire) and then aggregated to organizational level. It also implies that there need to be some form of shared psychological meaning (i.e. an acceptable level of agreement) among the employees of the organization, for the aggregated results to be viewed as an organizational climate (James et al., 2008). This view of climate will also be taken in this article.

There exist many questionnaires designed to measure organizational climate, a natural result of many years of research into the phenomenon. The quality of these instruments varies as some studies use researched and standardized instruments while others use locally developed ones (Hunter, Bedell, & Mumford, 2007). Patterson et al. (2005) acknowledge that there are good domain specific measurements (i.e. measurements that intend to measure climate only for a specific domain, such as innovation). On the other hand, they argued that all existing global measures had serious limitations, such as a lack of theoretical basis and/or proper validation.

The limitations in the measurements used in climate research are a clear problem with regard to interpretation of the results. Patterson et al. (2005) argue that the lack of theory and adequate validation resulted in an inability to draw clear research conclusions. The inconsistencies in assessment methods and operationalization of climate have also most likely lead to diverse findings regarding which aspects of climate are important (Patterson et al., 2005; Wilderom, Glunk, & Maslowski, 2000). Additionally the quality of the measurement used seems to be related to the strength of the research findings. A study by Hunter, Bedell

and Mumford (2007) reviewing climate measures for creativity and innovation showed that studies based on well-developed standardized instruments normally produced larger effects than did studies that were based on locally developed instruments.

Recognizing the importance of a good global climate measure, Patterson et al. (2005) address the concerns raised in an attempt to develop a better, more valid questionnaire to measure organizational climate, the Organizational Climate Measure (OCM). The following section of this article will briefly cover the theoretical foundation and development of this instrument.

Organizational Climate Measure: Theoretical Foundation and Development

OCM was designed using Quinn and colleges' (Quinn, 1988; Quinn & McGrath, 1982; Quinn & Rohrbaugh, 1983) Competing Values Model (CVM) as a theoretical framework for extracting 17 factors from the research literature meant to cover all the important aspects of organizational climate.

Theoretical Foundation

The CVM is a theoretical model developed in an attempt to identify and structure the most central concepts or values associated with effectiveness in an organizational setting. As a result the model is built upon several different schools of study within organizational effectiveness, and reflects long traditions within the field. Patterson et al. (2005) points to this as one of the model's strengths.

The values. The different values in the CVM are placed according to three different dimensions: external versus internal focus, flexibility versus control and means versus ends. The first two dimensions form four models, the human relations model, the open systems model, the rational goal model and the internal process model, se figure 1. These are the models which OCM is based upon (Patterson et al., 2005). The last of the three dimensions (means vs. ends) is not relevant for OCM and will therefore not be discussed in this article.

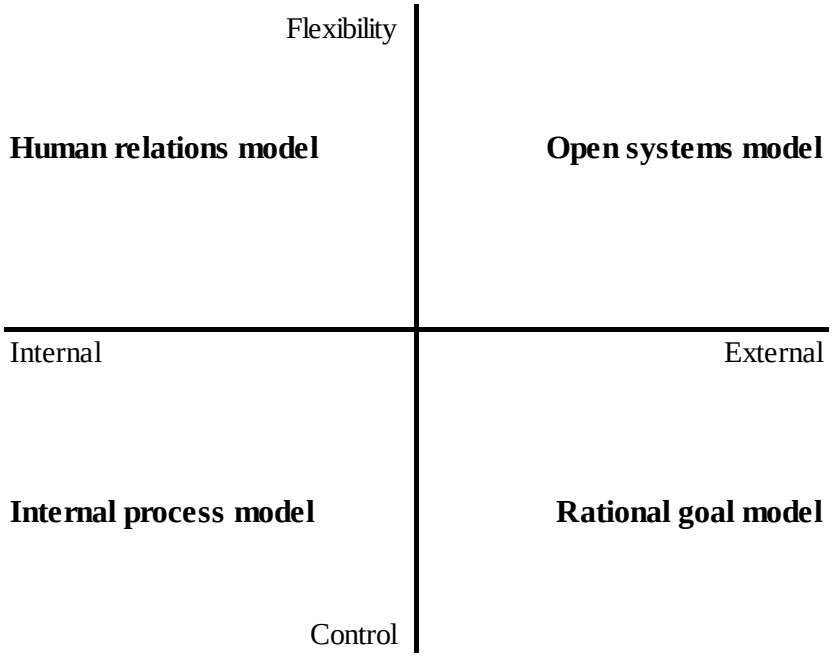

Figure 1: The Competing Values Model, based on Quinn & Rohrbaugh (1983)

- The human relations model (flexibility and internal focus) is defined by human commitment, decentralization and maintenance of the socio-technical system (Emery & Trist, 1965), also known as the interaction between the technical and the human/social aspect of the work place.
- The open systems model (flexibility and external focus) is defined by decentralization, expansion and focus on the competitive position of the overall system.
- The rational goal model (control and external focus) is defined by its focus on the competitive position of the overall system, maximization of output, and centralization-integration.
- The internal process model (control and internal focus) is defined by centralization-integration, continuity and maintenance of the socio-technical system.

Quinn and Rohrbaugh (1983) emphasize that the different values are not mutually exclusive within one organization. Even though some values will have an opposite position to each other on the dimension (and in the models) and therefore are paradoxical in nature, this does not make them empirical opposites. This is also the case for the factors in OCM (Patterson et al., 2005). This means that one organization, might for instance, highly emphasize a value

from the human relations model (e.g. autonomy) and at the same time, with equal strength, emphasize a value from the rational goals model (e.g. efficiency). Howard (1998) suggested that the rationale for these seemingly opposite poles not acting as empirically opposites could be that the motivation for some people emphasizing certain values (such as output) are different from the reasons others people have for emphasizing other values (such as teamwork).

Support for the model. The CVM has received empirical support from several different studies. Howard (1998) presents evidence that the CVM represents a valid framework for examining and understanding organizational culture. He argues that the model offers unique advantages as a tool for organizational analysis. Lamond (2003) supported Howards findings with data from an Australian sample, also strengthening the model generalizability. Kwan & Walker (2004) confirmed, in their study among education institutions in Hong Kong, the validity of the CVM model as a tool in differentiating organizations.

Development

When developing OCM Patterson et al. (2005) selected the dimensions most frequently utilized in research studies on climate from 1960 to 2000 that fitted into the CVM with a relatively unambiguous location in one of the four models. They refined the questionnaire using confirmatory factor analysis. The final result was 17 latent factors, divided among the four models. The dimensions were as presented in table 1. The model had acceptable reliability and the authors successfully tested for concurrent validity as well as predictive validity for some of the factors. They also tested the generalizability of the model comparing management with non-management and shop floor with non-shop floor. However, they only tested the instrument in the UK, and only on manufacturing companies. This limitation relates to the purpose of this study which will be discussed in the following section. For more details about OCM see Patterson et al. (2005).

Table 1: The models and factors in OCM

Human Relations	
	Autonomy (e.g. Jones & Fletcher, 2003)
	Integration (e.g. Lawrence & Lorsch, 1967)
	Involvement (e.g. Callan, 1993; Hollander & Offermann, 1990)
	Supervisory support (e.g. Johnson & Hall, 1988; Lee & Ashforth, 1996)
	Emphasis on training (e.g. Gattiker, 1995; Morrow, Jarrett & Rupinski, 1997)
	Employee welfare (e.g. Guest, 1998; Robinson & Rousseau, 1994)
Open System	
	Innovation & flexibility (e.g. Anderson & West 1998; Theorell, 2003)
	Outward focus (e.g. Kiesler & Sproull, 1982)
	Reflexivity (e.g. Schippers, Den Hartog & Koopman, 2007)
Rational Goals	
	Clarity of organizational goals (e.g. Arvey, Dewhirst & Bolind, 1976; Locke, 1991)
	Efficiency (e.g. Ostroff & Schmitt, 1993)
	Effort (e.g. McCaul, Hinsz & McCaul, 1987)
	Performance feedback (e.g. Pritchard, Jones, Roth, Stuebing & Ekeberg, 1988)
	Pressure to produce (e.g. Millken & Dunn-Jensen, 2005)
	Quality (e.g. Collard, 1992; Hackman & Wageman, 1995)
Internal Process	
	Formalization (e.g. Auh & Menguc, 2007)
	Tradition (e.g. Coch & French Jr., 1948)

The Purpose of this Study

The purpose of this study is to test the generalizability of OCM, as even though the instrument has been thoroughly tested, it has only been tested once. OCM was tested by Patterson et al. (2005) in the UK and the manufacturing sector only. This is a clear limitation to the assumption of the generalizability of the instrument. This is very important, as good generalizability means that the instrument can be used in other organizations than the ones originally tested. This opens up for a much broader use of the instrument and creates opportunities for comparisons across different organizations.

I believe that the factor structure will be generalizable across nations and to different sectors, as the factor structure that make up OCM is based on a theoretical framework that has been found to be generalizable across nations (Lamond, 2003). I expect to find support for

this assumption when testing a translated version of OCM in a Norwegian sample from the service sector. Therefore I expect that:

Hypothesis 1: Confirmatory factor analysis will support the 17-latent factor structure presented by Patterson et al. (2005)

Additionally, Patterson et al. (2005) decided that they were unable to conduct an exploratory factor analysis based on the data they had, due to missing data. They might have missed out on valuable information because of this. An exploratory factor analysis can be used as a basis for eliminating items that fail to load on any factors or that load on two or more factors with approximately equal strength, in addition to exploring the data for a more suitable number of latent factors. In fact, an exploratory factor analysis during the early stages of measurement development can increase the likelihood of a successful confirmation of model fit when executing a confirmatory factor analysis (Floyd & Widaman, 1995). Alternatively the failure to find a model that better fit the data will strengthen the assumption that the original model is the best fit for the data. As the model is based on a good theoretical foundation and the factors in the model are extracted from frequently used dimensions in organizational research I expect that:

Hypothesis 2: Exploratory factor analysis will fail in finding a more suitable model for the data.

Method

Respondents

The company. The research was conducted in the Norwegian subsidiary of an international company. The company operates in the service sector and offers a broad specter of different business to business services. It employs more than 470.000 people worldwide and its annual revenue is approximately EUR 8 billion. The company was approached through the Confederation of Norwegian Enterprise, NHO, and they were promised reports of the findings in return for their participation.

The individual respondents. The questionnaire was sent to 1262 respondents from 6 different departments in the company. The departments were chosen by the company. All the respondents were either employees with managerial responsibility or administrative staff.

Totally 555 respondents completed the questionnaire, of whom 54% were male and 46 % female. The respondents age span from 22 to 75 years of age, with an average age of 44 (std. deviation 9). There were 21% who had not finished high school, 27% had no more than high school (12 years), 33% had between 1 and 3 years of higher education after high school and 20% had more education than this. The data was collected from 27th of November to 31th of December 2008.

Questionnaire

The questionnaire utilized was a Norwegian translation of OCM. The translation was done in multiple steps, involving back translation. For the final version see appendix A. The questionnaire consisted of 82 items, divided into 17 scales. The number of items per scale varied from 4 to 6. The response format used was a 4-point Likert scale of *definitely false, mostly false, mostly true* and *definitely true* (as presented in Norwegian: *helt feil, ganske feil, ganske riktig* and h*elt riktig*).

Procedure

The questionnaire was distributed via e-mail and answered online. The e-mail addresses were provided by the company and due to the nature and size of the company the address list had some errors that might have affected the response rate (e.g. some of the addresses might no longer be in use). There is no reason to believe that the errors caused any other systematic effects on the sample.

In the e-mail invitation people were encouraged to answer. They were told that the questionnaire would take approximately 20 minutes to complete. The questionnaire was based on informed voluntary consent, and the respondents were ensured about their anonymity. When answering the questionnaire the respondents were given instructions to answer according to their perception of the company as a whole. Questions about management regarded both their supervisor as well as other parts of management in the company.

The items in the questionnaire were not randomly arranged in the questionnaire, unlike when administered by Patterson et al. (2005). As argued by Patterson et al. it is probable that people will extract the scales relevant to them, and not use the entire questionnaire in one

study. By arranging the items by the scales which they belonged to, the questionnaire was presented more similar to the way it is expected to be used in later studies.

The first 26 items were mandatory to answer, due to human error the following 56 questions were not.

Results

The questionnaire was completed by 555 employees, resulting in a 44% response rate, which is slightly above average for a study that collects data from organizations (Baruch & Holtom, 2008). There was some variation in response rate between the different departments (ranging from a response rate of 27% to 64%). Wave analyses were conducted controlling for response biases (Rogelberg & Stanton, 2007), comparing the responses of those who responded before (N=466) and after (N=89) the second reminder. There were no significant differences for early and late responses ($p<.01$) for any of the 17 dimensions in OCM.

Even though the questionnaire was not distributed to all employees it is reasonable to assume that this has not affected the main results in this article, as Patterson et al. (2005) found no difference between those with and those without managerial responsibility with regard to model fit.

As expected with a lengthy questionnaire there was some missing data. However, the per cent missing for each question was very low, between 0 and 2.3 % and Little's MCAR test (Schafer & Graham, 2002) supported that all data were missing completely at random. For all further analyses it was therefore assumed that all data that were missing was completely at random. Expectation-maximization (EM) algorithm was used to compute estimates to replace the missing data as a means to maximize the use of the collected data. The estimations were used on all analysis except for the exploratory factor analysis.

Another assumption made is that the latent factors correlate with each other. This is a natural assumption as Patterson et al. (2005) found all correlations between factors to be statistical significant with $p<.05$ except Autonomy and Quality ($p=.101$). Additionally many of the factors are predicted to correlate by theory (e.g. reflexivity and innovation (West, Hirst, Richter, & Shipton, 2004)). All statistical analysis will be done with this assumption.

Consensual Validity

Level of agreement was estimated to test consensual validity. Two of the most salient approaches, the r_{wg} index (James, Demaree, & Wolf, 1984) and the average deviation (AD) index (Burke, Finkelstein, & Dusig, 1999), was conducted (James et al., 2008), as can be seen in table 2.

The cut off point for AD varies dependent on size of the response scale. The AD values will not be discussed because there is no suggested cut off point for a 4-point scale (Burke & Dunlap, 2002).

For $r_{WG(J)}$ a value of .70 or above is commonly considered as an acceptable level of agreement (Lance, Butts, & Michels, 2006). However, the values for $r_{WG(J)}$ have been calculated using a uniform null distribution, an approach that assumes the respondents was not affected by any biases. If some of the respondents have been affected by biases this might result in inflated estimates of $r_{WG(J)}$ (LeBreton & Senter, 2007).

The $r_{WG(J)}$ values for the Norwegian data are well within the limit of .70, indicating consensual validity. This is despite the fact that the data is collected from a rather large and divisionalized organization which often means that sharedness is low (Anderson & West, 1998).

Table 2. IRA indices

	scales	$r_{WG(J)}$	$AD_{M(J)}$
1	Autonomy	0.87	0.60
2	Integration	0.84	0.65
3	Involvement	0.87	0.65
4	Supervisory support	0.87	0.53
5	Training	0.81	0.63
6	Welfare	0.84	0.57
7	Formalization	0.85	0.61
8	Tradition	0.78	0.66
9	Innovation & flexibility	0.90	0.58
10	Outwards focus	0.84	0.62
11	Reflexivity	0.89	0.54
12	Clarity of organizational goals	0.86	0.63
13	Efficiency	0.87	0.53
14	Effort	0.89	0.51
15	Performance feedback	0.86	0.56
16	Pressure to produce	0.85	0.59
17	Quality	0.84	0.59

Confirmatory Factor Analysis

A confirmatory factor analysis (CFA) was conducted to test the model fit. Using Structural Equation Modeling on the data collected from the Norwegian sample the results for model fit presented in table 3 was achieved.

Table 3. Goodness of fit indices for OCM 17-latent facor model

Index	
GFI	0.769
AGFI	0.747
CFI	0.85
RMSEA	0.044 (LO90: 0.043 HI90: 0.046)
Chi-squared (d.f.)	6473.7 (3103)

N=555

There exist different indices of model fit, because there exist different approaches to defining a good model fit. There is no unitary agreement about one indice that is the best for all models, though some are regarded as better than others (Fan & Sivo, 2007). It is therefore important to look at the different indices and their appropriateness for the model.

RMSEA. A RMSEA (root mean squared error of approximation) should be below 0.08 for an acceptable fit, and a value below 0.05 is considered a good fit (McDonald & Ho, 2002). With a value of 0.04 the RMSEA results from the Norwegian data, similarly to the results from Patterson et al. (2005), can be considered as good evidence that the model predicts the observed covariance among the items very well. The results also suggest a very stabile RMSEA (with LO90: 0.043 and HI90: 0.046) indicating that the low RMSEA is not caused by chance. There is, however, evidence that RMSEA rewards simpler models and a high number of items which might cause RMSEA to be artificially low when testing OCM (Fan & Sivo, 2007).

CFI. CFI (comparative fit index) should normally have a value of 0.9 or higher to be considered a good fit (McDonald & Ho, 2002). Both the statistics from Patterson et al. (2005) and the statistics made on the Norwegian sample failed to meet this level. However, it is argued that achieving high levels of fit with such a large number of items is difficult or close to impossible (Floyd & Widaman, 1995; Patterson et al., 2005). For this reason and because of the structure of the model (e.g. items only load on one factor each) Patterson et al. argue that the low CFI is due to other reasons than the lack of fit by the model. This conclusion is

not unique. Blunch (2008) argued that even though CFI should ideally be above 0.90-0.95, it was not a problem as long as it was above 0.80 and RMSEA was good.

Residual correlations. It is also normal to expect that the residual values for each correlation should be bellow 0.10, and residual correlations above this level indicate pockets of relatively poor fit (Kline, 1998). In fact 9.6% of the correlations measured had a residual value of 0.10 or more. This is, however, to be expected by a model containing 82 items. Pairs of items often share variance apart from the variance explained by the latent factors due to item content overlap. A large number of items increase the potential of correlated errors. This makes it more difficult to maintain low levels of residual values and to achieve high values of CFI (Floyd & Widaman, 1995).

Other fit indices. Other common model fit indices is chi-square/degrees of freedom, Goodness of Fit Index (GFI) and Adjusted Goodness of Fit Index (AGFI). However, these have not fared well in Monte Carlo evaluations (Floyd & Widaman, 1995) and will therefore not be discussed further in this study.

Other indicators. The analysis also showed relatively high factor loadings (most items loaded on the predicted factor with 0.50 or more) which supports the model, see table 4. Cronbach's apha was above 0.70 for all factors except autonomy (0.666). Additionally the modification indices in SEM suggested no modifications that would greatly improve the model fit. Some factors correlated highly with each other (e.g. involvement and supervisory support had an estimated correlation of 0.862). For more details see table 5.

Table 4: Standardized regression weigths

Dimension	Item	Estimate	Item	Estimate	Item	Estimate	Item	Estimate	Item	Estimate
Autonomy	Q1	0.530	Q2	0.557	Q3	0.402	Q4	0.496	Q5	0.414
Integration	Q6	0.604	Q7	0.730	Q8	0.613	Q9	0.588	Q10	0.676
Involvement	Q11	0.691	Q12	0.718	Q13	0.491	Q14	0.721	Q15	0.572
	Q16	0.582								
Supervisory support	Q17	0.779	Q18	0.656	Q19	0.717	Q20	0.709	Q21	0.835
Training	Q22	0.667	Q23	0.803	Q24	0.679	Q25	0.437		
Welfare	Q26	0.669	Q27	0.941	Q28	0.949	Q29	0.867		
Formalization	Q30	0.718	Q31	0.528	Q32	0.731	Q33	0.662	Q34	0.749
Tradition	Q35	0.630	Q36	0.723	Q37	0.784	Q38	0.599		
Innovation & flexibility	Q39	0.675	Q40	0.716	Q41	0.742	Q42	0.795	Q43	0.765
	Q44	0.571								
Outwards focus	Q45	0.723	Q46	0.822	Q47	0.765	Q48	0.646	Q49	0.539
Reflexivity	Q50	0.591	Q51	0.374	Q52	0.516	Q53	0.616	Q54	0.762
Clarity of organizational goals	Q55	0.629	Q56	0.741	Q57	0.576	Q58	0.882	Q59	0.881
Efficiency	Q60	0.704	Q61	0.717	Q62	0.720	Q63	0.865		
Effort	Q64	0.748	Q65	0.739	Q66	0.495	Q67	0.847	Q68	0.644
Performance feedback	Q69	0.734	Q70	0.799	Q71	0.593	Q72	0.515	Q73	0.622
Pressure to produce	Q74	0.620	Q75	0.543	Q76	0.788	Q77	0.756	Q78	0.383
Quality	Q79	0.737	Q80	0.883	Q81	0.636	Q82	0.409		

For full view of the questions, see appendix A

Table 5. Cronbach's alpha, means, SD's and correlations for the climate scales

Scals	Cronbach alpha	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1 Autonomy	0.666	2.636	0.480																
2 Integration	0.791	2.615	0.574	0.446															
3 Involvement	0.795	2.500	0.544	0.617	0.666														
4 Supervisory support	0.858	2.879	0.577	0.595	0.609	0.862													
5 Training	0.764	2.312	0.599	0.293	0.475	0.741	0.618												
6 Welfare	0.904	2.782	0.644	0.443	0.496	0.678	0.72	0.583											
7 Formalization	0.819	2.846	0.583	-0.114	0.293	0.256	0.159	0.288	0.292										
8 Tradition	0.810	2.329	0.650	-0.275	-0.382	-0.419	-0.421	-0.352	-0.46	-0.346									
9 Innovation & flexibility	0.844	2.630	0.529	0.398	0.558	0.661	0.641	0.578	0.665	0.303	-0.683								
10 Outwards focus	0.835	3.146	0.601	0.294	0.487	0.495	0.425	0.397	0.482	0.354	-0.582	0.567							
11 Reflexivity	0.721	2.770	0.482	0.222	0.52	0.556	0.591	0.529	0.604	0.292	-0.615	0.774	0.640						
12 Clarity of organizational goals	0.876	2.616	0.610	0.306	0.457	0.530	0.468	0.458	0.54	0.302	-0.499	0.618	0.495	0.650					
13 Efficiency	0.850	1.812	0.560	0.18	0.374	0.372	0.335	0.343	0.237	0.149	-0.209	0.278	0.187	0.217	0.286				
14 Effort	0.838	3.088	0.541	0.307	0.482	0.417	0.394	0.403	0.471	0.298	-0.317	0.424	0.444	0.488	0.445	0.230			
15 Preformance feedback	0.804	2.854	0.563	0.334	0.374	0.566	0.579	0.512	0.57	0.278	-0.397	0.525	0.542	0.651	0.496	0.216	0.501		
16 Pressure to produce	0.790	2.903	0.564	-0.228	-0.287	-0.373	-0.34	-0.365	-0.34	-0.034	0.121	-0.276	-0.146	-0.262	-0.149	-0.082	0.008	-0.229	
17 Quality	0.754	3.061	0.555	0.239	0.445	0.464	0.453	0.409	0.523	0.461	-0.395	0.52	0.715	0.634	0.541	0.184	0.573	0.609	-0.102

N=555

All correaltions are statistical significant with p=0.05, except for those between pressure to produce and formalization (p=0.518), efficiancy (p= 0.108) and effort (p =0.878)

Exploratory Factor Analysis

Patterson et al. (2005) decided that they were unable to conduct an EFA based on the data they had, due to a problem with missing data. The data collected from the Norwegian sample contains fewer missing data. In fact 473 respondents (more than 85%) completed the entire questionnaire. The data was therefore deemed as suitable for an EFA.

When doing an EFA it is desirable to do a cross-validation. For this reason the data was randomly divided in two parts of approximately the same size. An EFA was conducted on the first part to look for improvements in the model. To validate the improvements a confirmatory factor analysis (CFA) was conducted on the second part of the data.

The Norwegian data however, had a problem with few respondents compared to the number of items in OCM. A general rule of thumb when doing EFA, is that you should have at least 5 times as many respondents as items measured (Gorsuch, 1983) as OCM consist of 82 items ideally the sample size would minimally be 410 respondents. There is not total consensus about this rule, studies have shown that a sample of about 300 should be enough to achieve stable results regardless of the number of items (Tabachnick & Fidell, 2007). Yet the Norwegian data is still a few respondents short of meeting this criterion, when the sample was randomly divided in two there were only approximately 277 respondents in each part. To best maximize the use of the data pair wise (instead of list wise) elimination of missing data was used.

The parallel analysis criterion (Horn, 1965) was used to estimate that the ideal cutoff point for the number of factors was when eigenvalue =1.87, which resulted in 9 factors. Maximum likelihood (ML) was used in extracting the factors and the rotation method was oblimin with Kaiser Normalization. The pattern- and structure matrix from the EFA on the first dataset can be seen in appendix B and appendix C.

There are several criteria for eliminating items. Factor loadings are generally considered to be meaningful when they exceed .30 or .40 (Floyd & Widaman, 1995), for this study the limit is set at .30. Additionally it is normally considered that the difference between factor loadings of an item should be >.20, a factor should have at least 3 items loading on the factor and a Cronbach's apha of >0.70 (Den Hartog, Van Muijen, & Koopman, 1997; Schippers, Den Hartog, & Koopman, 2007). This resulted in the following 9 factors (the items kept for each factor is marked in bold in appendix B):

Factor 1: Task related HR (including supervisory support, emphasis on training, integration, autonomy and involvement)
Factor 2: Formalization
Factor 3: Efficiency
Factor 4: Clarity of organizational goals
Factor 5: Facilitating change (including flexibility and innovation, reflexivity and tradition)
Factor 6: Pressure to produce
Factor 7: Outward focus
Factor 8: Employee welfare
Factor 9: Performance feedback

CFA analyses were conducted on the second dataset testing both the original 17 factor model and the modified 9 factor model. As shown in table 6 the modified 9 factor model gave no improvements in model fit, for either CFI or RMSEA, compared to the original 17 factor model.

Table 6. Goodness of fit indices for the 17-factor model and the modified OCM 9-factor model

Index	Original 17 factor model	Modified 9 factor model
GFI	0.676	0.709
AGFI	0.645	0.689
CFI	0.815	0.809
RMSEA	0.051	0.060
Chi-squared (d.f.)	5246.29 (3103)	3010.816 (1559)

N=263

The CVM Models

As mentioned earlier OCM is designed on the four models in the CVM. When testing the four models separately, the results presented in table 7 were achieved. While all of the RMSEA values are still below 0.08, all but one of the CFI values are also above 0.90. The model that received a lower CFI score is also the model comprising of the highest number of items. This is approximately the same results as those presented by Patterson et al. (2005).

Table 7. Goodness of fit indices for the models

Index	GFI	AGFI	CFI	RMSEA	Chi-squared (d.f.)
Human Relations Model	0.878	0.853	0.906	0.059	1051.9 (362)
Internal Proces Model	0.963	0.933	0.957	0.071	98.8 (26)
Open Systems Model	0.922	0.895	0.921	0.069	367.6 (101)
Rational Goal Model	0.865	0.839	0.891	0.064	1091.7 (335)

N=555

Discussion

The purpose of this study was to investigate the generalizability of OCM. The study has replicated the findings of model fit from Patterson et al. (2005) based on a Norwegian sample. Additionally further investigations have been conducted using an exploratory factor analysis.

Regarding hypothesis 1, that confirmatory factor analysis will support the 17-latent factor structure presented by Patterson et al. (2005), I conclude in favor of supporting the hypothesis, even though there were some contradictory results. RMSEA indicated a very good model fit while CFI indicated a poor fit. These results are similar to that of Patterson et al., who disregarded the CFI results on the basis that it is very difficult to receive high values when the model tested contains as many observed variables as OCM. I question if this was the right decision, as it is also shown that RMSEA favors models with many items (Fan & Sivo, 2007) and might therefore have given exaggerated positive response.

The contradictory model fit indices and the high number of items that constitute OCM makes it important to assess the appropriateness of the assumed cut-off criteria for the different model fit indices. As argued by Fan and Sivio (2007), as long as fit indices are sensitive to the type and size of models, when these models contain the same amount of specification error, it is premature to use any set cut-off criteria for Structural Equation Modeling fit indices as general guidelines for model fit assessment. In other words the general cut-off criteria of 0.9 for CFI and 0.5 (or 0.8) for RMSEA might both be inappropriate with regards to the model. If one accept the argument made by Blunch (2008), that a model receiving a good RMSEA should simply need a CFI above 0.8 to be regarded as a good model fit to the data, the 17 factor model is clearly supported by the model fit indices. Based on this reasoning I conclude that hypothesis 1 is confirmed.

The 17 factor model is further supported by the confirmation of hypothesis 2, that exploratory factor analysis will fail in finding a more suitable model for the data. The alternative model derived from exploratory factor analysis did not yield better results than the original 17 latent factor model in a cross-validation. This strengthens the assumption that the 17-factor model is not only an acceptable fit to the data, but the best model for the data.

Based on the positive confirmation of both hypothesis 1 and 2 I conclude that results from the Norwegian sample indeed support the 17-latent factor model presented by Patterson et al. (2005).

Limitations

The sample size of this study is somewhat below what is recommended. When dividing the sample of 555 in two to conduct an exploratory factor analysis with cross validation, each sample was below 300, and therefore less than optimal. This might have resulted in unreliable results on the exploratory factor analysis. If this is the case, the failure to find a more suitable model might not be because there is no alternative model that will fit our data better, and therefore weaken the conclusions drawn from the support of hypothesis 2. However, I believe that the data was still rather reliable, as the model fit indices for the original 17-factor model was still relatively good in the small sample.

The instrument was also only tested on one company which made it impossible to test whether the translated version of OCM is able to discriminate between companies. However, there is little reason to believe that the Norwegian version of OCM will not discriminate, as the Norwegian findings otherwise have been very similar to the findings from the original study, which showed good discriminant validity.

Finally there has been some negative feedback, prior to this study, regarding the wording in the Norwegian translation. Attempts were made to clarify any uncertainties in the instructions to the questionnaire (e.g. by defining key words), but no changes were made to the actual wording of the questions. There is no reason to believe that any particular question was systematically misunderstood, though changes could have been made to make the questionnaire even easier to understand.

Implications of the Findings

Generalizability. Patterson et al. (2005) argued that OCM had good generalizability as they found almost identical fit indices for the model for different levels within the organization (management/non-management, shop floor/non shop floor). By successfully replicating their findings in a Norwegian sample from the service sector, the results from this article strengthened this assumption, indicating that the model can be generalized also across borders and to different types of companies other than the manufacturing company where Patterson et al. first tested the model.

Norwegian translation. The successful replication of the findings from Patterson et al. (2005) using the translated version of OCM, also support the validity of the Norwegian version. This is also supported by Lone (2009) which showed concurrent validity for the factor innovation and flexibility, based on the same dataset used in this article.

Further studies. This study supports the 17-latent factor model, however, it has not investigated the possibility that other questions than the ones that make up OCM might better capture the latent factors OCM intends to measure. When describing the development of OCM, Patterson et al. (2005) give good theoretical explanations for the latent factors included in OCM, but say little of how they have arrived at the definitions for each latent factor or how the questions have been developed. Further studies should be conducted to investigate whether better questions can yield other results and a better model fit.

Concluding Remarks

The OCM show promise as a good, reliable and valid global organizational climate measure. This is something that so far, according to Patterson et al. (2005), has been missing from the research literature. As this study indicates, OCM seems to be generalizable across industries and nations, opening up for a broader use of the instrument. A broad use of a more reliable and valid instrument can in return lead to better opportunities in comparing findings across different studies. In this way OCM can help in forming a clearer picture on the strengths different climate dimensions have on outcome factors compared to each other. OCM might therefore prove to be an important and useful tool in further research and practice.

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Appendix A: Organizational Climate Measure – Norwegian version

Response format: 1 = Helt feil, 2 = Ganske feil, 3 = Ganske riktig, 4 = Helt riktig
Items marked with an asterisk (*) is reversed before the scale is calculated.

Autonomy (Autonomi)

Q1 Ledelsen lar stort sett folk ta sine egne beslutninger

Q2 Ledelsen har tillit til at folk kan ta arbeidsrelaterte beslutninger uten å innhente tillatelse først

Q3 Ledelsen holder streng kontroll med arbeidet til de ansatte*

Q4 Ledelsen har for strengt regime over måten ting blir gjort på *

Q5 Det er viktig å dobbeltsjekke med sjefen før man tar en beslutning*

Integration (Integrasjon)

Q6 Folk er mistenksomme overfor andre avdelinger*

Q7 Det er svært lite konflikt mellom avdelingene her

Q8 Folk er innstilt på å dele informasjon på tvers av avdelinger

Q9 Det er svært effektivt samarbeid mellom avdelingene

Q10 Det er lite respekt mellom noen av avdelingene her*

Involvment (Involvering)

Q11 Ledelsen lar de ansatte medvirke i beslutninger som angår dem

Q12 Endringer blir gjort uten å snakke med de involverte*

Q13 Folk har ingen innvirkning i avgjørelser som påvirker arbeidet deres*

Q14 Folk føler at beslutninger ofte tas uten at de blir hørt*

Q15 Informasjon deles i stor grad

Q16 Det er ofte kommunikasjonssvikt her*

Supervisory Support (Veiledning)

Q17 Overordnede er svært dyktige til å forstå folks problemer

Q18 Overordnede viser at de har tiltro til sine ansatte

Q19 Overordnede hos oss er vennlige og lett å henvende seg til

Q20 Folk kan stole på at overordnede gir god veiledning

Q21 Overordnede viser forståelse for sine ansatte

Training (Trening)

Q22 Folk får ikke tilstrekkelig opplæring i nye systemer eller nytt utstyr*

Q23 Folk får tilstrekkelig opplæring i bruk av nye systemer og utstyr

Q24 Bedriften gir kun et minimum av den opplæringen folk trenger for å gjøre jobben sin*

Q25 Folk blir sterkt oppmuntret til å utvikle sine ferdigheter

Welfare (Velferd)

Q26 Denne bedriften vier lite oppmerksomhet til ansattes interesser*

Q27 Denne bedriften forsøker å ta vare på sine ansatte

Q28 Denne bedriften bryr seg om sine ansatte

Q29 Denne bedriften prøver å handle rettferdig overfor sine ansatte

Formalization (Formalisering)

Q30 Hos oss blir det oppfattet som svært viktig å følge reglene

Q31 Folk kan ignorere formelle prosedyrer og regler hvis det bidrar til å få jobben gjort*

Q32 Hos oss må alt gjøres etter reglene

Q33 Hos oss er det ikke nødvendig å følge alle prosedyrer til punkt og prikke*

Q34 Hos oss blir ingen særlig opprørt hvis reglene brytes*

Tradition (Tradisjon)

Q35 Toppledelsen foretrekker å holde seg til etablerte, tradisjonelle måter å gjøre ting på

Q36 Måten denne organisasjonen gjør ting på har aldri forandret seg særlig mye

Q37 Ledelsen er ikke interessert i å prøve ut nye ideer

Q38 Hos oss skjer endringer i måten ting gjøres på svært langsomt

Innovation & Flexibility (Innovasjon og fleksibilitet)

Q39 Hos oss blir nye ideer gjerne akseptert

Q40 Bedriften reagerer raskt når endringer er nødvendig

Q41 Behov for å gjøre ting annerledes fanges raskt opp av ledelsen

Q42 Denne organisasjonen er svært fleksibel; den kan raskt endre prosedyrer for å møte nye vilkår, og problemer løses når de oppstår

Q43 Støtte til utvikling av nye ideer er lett tilgjengelig

Q44 Folk i denne organisasjonen er alltid ute etter å se problemer fra nye vinkler

Outward Focus (Ytre fokus)

Q45 Denne organisasjonen er ganske innadrettet; man bryr seg ikke om hva som skjer i markedet*

Q46 Det legges ikke mye vekt på måter å bedre kundeservicen*

Q47 Kundens behov er ikke ansett som topp prioritet hos oss*

Q48 Denne bedriften er treg til å reagere på kundenes behov*

Q49 Denne organisasjonen er stadig på jakt etter nye muligheter i markedet

Reflexivity (Refleksivitet)

Q50 Måten de ansatte jobber sammen på i denne organisasjonen endres gjerne hvis det bedrer prestasjonen

Q51 Arbeidsmetodene brukt i denne bedriften blir ofte diskutert

Q52 Hvorvidt de ansatte jobber effektivt sammen, blir regelmessig diskutert

Q53 Denne organisasjonens målsetninger endres i takt med forandringer i miljøet

Q54 I denne organisasjonen tar man seg tid til å evaluere organisasjonens målsetninger

Clarity of Organizational Goals (Klarhet i organisasjons mål)

Q55 Folk har en god forståelse av organisasjonens formål

Q56 Bedriftens fremtidige retning blir klart og tydelig kommunisert til alle

Q57 Folk har ikke en klar forståelse av hva som er bedriftens mål*

Q58 Alle som jobber her er bevisst på bedriftens fremtidsplaner og retning

Q59 Det finnes en klar oppfattning av hvor bedriften går

Efficiency (Effektivitet)

Q60 Tid og penger kunne blitt spart dersom arbeidet var bedre organisert*

Q61 Ting kunne blitt gjort mye mer effektivt hvis folk tok seg tid til å tenke seg om*

Q62 Dårlig planlegging resulterer ofte i at man ikke når sine målsetninger*

Q63 Produktiviteten kunne blitt forbedret om arbeidet ble bedre organisert og planlagt*

Effort (Innsats)

Q64 Hos oss ønsker folk alltid å prestere så godt de kan

Q65 Folk er entusiastiske i forhold til jobben sin

Q66 Her slipper folk unna med å gjøre så lite som mulig*

Q67 Folk er innstilt på å gjøre en ekstra innsats for å utføre en god jobb

Q68 Her legger ikke folk mer innsats i arbeidet sitt enn det de må*

Preformance Feedback (Feedback på prestasjon)

Q69 Folk får som regel tilbakemelding i forhold til kvaliteten på det arbeidet de gjør

Q70 Folk har ingen anelse om hvorvidt de gjør en god jobb*

Q71 Det er generelt vanskelig for ansatte å vurdere kvaliteten på det de presterer*

Q72 Folks prestasjoner måles regelmessig

Q73 Måten folk gjør jobben sin på blir sjelden evaluert*

Pressure to Produce (Produksjonspress)

Q74 Det forventes for mye av folk i løpet av en dag

Q75 Vanligvis er ikke folks arbeidsbelastning spesielt krevende*

Q76 Ledelsen krever at folk jobber ekstremt hardt

Q77 Folk er under sterkt press for å nå målsetninger

Q78 Arbeidstempoet her er ganske avslappet*

Quality (Kvalitet)

Q79 Denne bedriften forsøker alltid å oppnå de høyeste kvalitetsstandardene

Q80 Hos oss blir kvalitet tatt svært seriøst

Q81 Folks oppfatning er at bedriftens suksess avhenger av høy kvalitet på arbeidet

Q82 Denne bedriften har ikke noe særlig rykte for å levere produkter av topp kvalitet*

Appendix B: Pattern Matrix

Table B1 presents the pattern matrix from the exploratory factor analysis conducted in this article. Items that were kept for each factor is marked in bold.

Table B1: Pattern Matrix

	Factor								
	1	2	3	4	5	6	7	8	9
Folk føler at beslutninger ofte tas uten at de blir hørt	**.664**			-.145					
Overordnede viser forståelse for sine ansatte	**.636**							-.144	.134
Folk kan stole på at overordnede gir god veiledning	**.625**				-.109				.185
Ledelsen lar de ansatte medvirke i beslutninger som angår dem	**.597**			-.102					
Overordnede er svært dyktige til å forstå folks problemer	**.589**				-.137		-.153	-.116	.101
Overordnede viser at de har tiltro til sine ansatte	**.549**	-.129						-.149	
Endringer blir gjort uten å snakke med de involverte	**.548**	.117		-.137					
Informasjon deles i stor grad	**.544**		.126						.146
Overordnede hos oss er vennlige og lett å henvende seg til	**.531**	-.158							.193
Folk får tilstrekkelig opplæring i bruk av nye systemer og utstyr	**.469**	.156			-.130	-.117			
Det er ofte kommunikasjonssvikt her	**.453**		.153		-.102		.103		
Det er svært lite konflikt mellom avdelingene her	**.451**							-.105	-.193
Bedriften gir kun et minimum av den opplæringen folk trenger for å gjøre jobben sin	**.444**	.174			-.149	-.189			
Ledelsen har tillit til at folk kan ta arbeidsrelaterte beslutninger uten å innhente tillatelse først	**.425**	-.163	-.107			.117	.141	-.122	
Folk blir sterkt oppmuntret til å utvikle sine ferdigheter	.403				-.182		-.141		.252
Folk er innstilt på å dele informasjon på tvers av avdelinger	**.391**		.126		-.145				
Folk er mistenksomme overfor andre avdelinger	**.356**						.120	-.139	-.101
Det er svært effektivt samarbeid mellom avdelingene	.312		.267						

Det er lite respekt mellom noen av avdelingene her	.304		.178				.125	-.199	-.171
Ledelsen har for strengt regime over måten ting blir gjort på	.303	-.273		-.170	.127	-.151	.283		
Folk får ikke tilstrekkelig opplæring i nye systemer eller nytt utstyr	.292	.128							
Ledelsen lar stort sett ansatte ta sine egne beslutninger	.255	-.173					.110	-.159	
Hos oss må alt gjøres etter reglene		**.755**		-.112			-.120		
Hos oss er det ikke nødvendig å følge alle prosedyrer til punkt og prikke		**.715**							
Folk kan ignorere formelle prosedyrer og regler hvis det bidrar til å få jobben gjort		**.587**		-.116	.119				-.110
Hos oss blir det oppfattet som svært viktig å følge reglene		**.583**				.145	-.110	-.199	.108
Hos oss blir ingen særlig opprørt hvis reglene brytes		**.579**					.318		
Ledelsen holder streng kontroll med arbeidet til de ansatte	.138	-.350	-.130	-.121	.139		.227		-.194
Hos oss blir kvalitet tatt svært seriøst		.324			-.123	.155	.145	-.249	.198
Folks oppfatning er at bedriftens suksess avhenger av høy kvalitet på arbeidet		.312	-.127			.123	.103		.212
Denne bedriften forsøker alltid å oppnå de høyeste kvalitetsstandardene		.271	-.111	-.113	-.232	.240	.144	-.139	.144
Denne bedriften har ikke noe særlig rykte for å levere produkter av topp kvalitet	.167	.210	.191				.191	-.163	
Produktiviteten kunne blitt forbedret om arbeidet ble bedre organisert og planlagt			**.825**						
Dårlig planlegging resulterer ofte i at man ikke når sine målsetninger	-.130	-.171	**.800**						
Ting kunne blitt gjort mye mer effektivt hvis folk tok seg tid til å tenke seg om	.120		**.665**		.112				
Tid og penger kunne blitt spart dersom arbeidet var bedre organisert		.101	.639						
Det finnes en klar oppfattning av hvor bedriften går				**-.821**					
Alle som jobber her er bevisst på bedriftens fremtidsplaner og retning		.138		**-.793**			-.106		
Bedriftens fremtidige retning blir klart og tydelig kommunisert til alle				**-.676**					.136
Folk har en god forståelse av organisasjonens formål				**-.551**				-.184	
Folk har ikke en klar forståelse av hva som er bedriftens mål				**-.550**			.150		

I denne organisasjonen tar man seg tid til å evaluere organisasjonens målsetninger	.175		-.312	-.259				.171
Hos oss skjer endringer i måten ting gjøres på svært langsomt				**.608**		-.169		
Denne organisasjonen er svært fleksibel; den kan raskt endre prosedyrer for å møte nye vilkår, og problemer løses når de oppstår	.133			**-.593**			-.131	
Bedriften reagerer raskt når endringer er nødvendig				**-.578**			-.205	
Behov for å gjøre ting annerledes fanges raskt opp av ledelsen	.349			-.509		-.103		
Støtte til utvikling av nye ideer er lett tilgjengelig	.190			**-.423**	-.111		-.187	.110
Toppledelsen foretrekker å holde seg til de etablerte, tradisjonelle måtene å gjøre ting på	-.107		.175	**.400**		-.189		.187
Arbeidsmetodene brukt i denne bedriften blir ofte diskutert				**-.399**				
Måten denne organisasjonen gjør ting på har aldri forandret seg særlig mye		-.100	.263	.395		-.252		.144
Ledelsen er ikke interessert i å prøve ut nye ideer	-.117		.279	.391		-.232		
Måten de ansatte jobber sammen på i denne organisasjonen endres gjerne hvis det bedrer prestasjonen	.178			**-.386**		.135		
Hos oss blir nye ideer gjerne akseptert	.236		-.220	-.375			-.123	
Folk i denne organisasjonen er alltid ute etter å se problemer fra nye vinkler				**-.346**				.142
Denne organisasjonens målsetninger endres i takt med forandringer i miljøet			-.149	-.345				.105
Hvorvidt de ansatte jobber effektivt sammen, blir regelmessig diskutert				-.307				.291
Denne organisasjonen er stadig på jakt etter nye muligheter i markedet			-.246	-.247	.154	.193		.193
Arbeidstempoet her er ganske avslappet					**.650**	.106		
Folk er under sterkt press for å nå målsetninger		-.130			**.646**	-.202	.102	
Ledelsen krever at folk jobber ekstremt hardt				.117	**.604**	-.118	.239	
Det forventes for mye av folk i løpet av en dag					**.577**	-.111	.240	
Vanligvis er ikke folks arbeidsbelastning spesielt krevende	-.125	.144			**.566**	.140		
Folk er innstilt på å gjøre en ekstra innsats for å utføre en god jobb	.118			-.161	**.425**		-.227	
Her legger ikke folk mer innsats i arbeidet sitt enn det de må		.142			**.414**	.182	-.165	.102

Hos oss ønsker folk alltid å prestere så godt de kan	.119			-.132		.371	-.344	
Folk er entusiastiske i forhold til jobben sin	.258					.354	-.248	
Her slipper folk unna med å gjøre så lite som mulig			.153			.341	.225	-.141	.212
Kundens behov er ikke ansett som topp prioritet hos oss		.178			-.142		**.641**	-.119	.188
Denne organisasjonen er ganske innadrettet; man bryr seg ikke om hva som skjer i markedet				-.125	-.247		**.565**		.135
Det legges ikke mye vekt på måter å bedre kundeservicen		.140			-.240		**.563**		.147
Denne bedriften er treg til å reagere på kundenes behov			.182		-.194		**.535**	-.101	.149
Folk har ingen innvirkning i avgjørelser som påvirker arbeidet deres	.310		-.150	-.102	.120		.345		
Det er viktig å dobbeltsjekke med sjefen før man tar en beslutning	.107	-.214					.245		
Denne bedriften forsøker å ta vare på sine ansatte				-.159		-.106	**-.862**	
Denne bedriften bryr seg om sine ansatte				-.153		-.118	**-.782**	
Denne bedriften prøver å handle rettferdig overfor sine ansatte						-.111	**-.678**	
Denne bedriften vier lite oppmerksomhet til ansattes interesser	.129			-.204		-.183	.142	**-.451**	
Måten folk gjør jobben sin på blir sjelden evaluert	.118			-.160			.103		**.600**
Folk har ingen anelse om hvorvidt de gjør en god jobb							.213	-.182	**.600**
Folks prestasjoner måles regelmessig				-.204	-.105			.162	**.588**
Folk får som regel tilbakemelding i forhold til kvaliteten på det arbeidet de gjør	.307								**.561**
Det er generelt vanskelig for ansatte å vurdere kvaliteten på det de presterer			.116	-.116			.193	-.161	**.430**

Extraction Method: Maximum Likelihood.
Rotation Method: Oblimin with Kaiser Normalization.
a. Rotation converged in 43 iterations.

Items that are kept for each factor is marked in Bold

Appendix C: Structural Matrix

Table C1 presents the structure matrix from the exploratory factor analysis conducted in this article.

Table C1: Structure Matrix

	Factor								
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Overordnede viser forståelse for sine ansatte	.739		.111	-.339	-.227	-.113	.206	-.518	.243
Folk føler at beslutninger ofte tas uten at de blir hørt	.719		.103	-.391	-.218	-.111	.310	-.391	.116
Overordnede er svært dyktige til å forstå folks problemer	.696		.176	-.363	-.367	-.132		-.483	.244
Folk kan stole på at overordnede gir god veiledning	.687		.219	-.329	-.347		.137	-.432	.304
Ledelsen lar de ansatte medvirke i beslutninger som angår dem	.684			-.347	-.193		.278	-.447	
Overordnede viser at de har tiltro til sine ansatte	.677		.130	-.352	-.238		.233	-.490	.190
Endringer blir gjort uten å snakke med de involverte	.652	.147	.170	-.378	-.211		.251	-.443	.119
Informasjon deles i stor grad	.608	.102	.254	-.280	-.296		.189	-.386	.254
Overordnede hos oss er vennlige og lett å henvende seg til	.594	-.119		-.285	-.189		.149	-.392	.262
Bedriften gir kun et minimum av den opplæringen folk trenger for å gjøre jobben sin	.565	.205	.200	-.278	-.324	-.194	.217	-.388	.148
Det er svært lite konflikt mellom avdelingene her	.530	.106	.155	-.279	-.178		.225	-.363	
Folk får tilstrekkelig opplæring i bruk av nye systemer og utstyr	.528	.184	.200	-.230	-.299	-.140	.102	-.343	.180
Det er ofte kommunikasjonssvikt her	.524		.268	-.225	-.257		.267	-.318	.107
Ledelsen har tillit til at folk kan ta arbeidsrelaterte beslutninger uten å innhente tillatelse først	.507	-.141		-.235			.307	-.363	
Folk blir sterkt oppmuntret til å utvikle sine ferdigheter	.487			-.307	-.377			-.380	.374
Folk er mistenksomme overfor andre avdelinger	.485		.186	-.230	-.136		.275	-.357	
Folk er innstilt på å dele informasjon på tvers av avdelinger	.461		.217	-.184	-.250		.138	-.292	
Ledelsen har for strengt regime over måten ting blir gjort på	.449	-.258		-.272		-.170	.378	-.252	
Det er lite respekt mellom noen av avdelingene her	.446	.110	.262	-.188	-.111		.284	-.373	

Det er svært effektivt samarbeid mellom avdelingene	.417		.352	-.219	-.222		.199	-.271	
Ledelsen lar stort sett ansatte ta sine egne beslutninger	.367	-.165		-.175			.212	-.286	
Folk får ikke tilstrekkelig opplæring i nye systemer eller nytt utstyr	.358	.156	.177	-.163	-.184		.176	-.233	.153
Hos oss må alt gjøres etter reglene		.758	.120	-.194	-.105			-.180	
Hos oss er det ikke nødvendig å følge alle prosedyrer til punkt og prikke		.686		-.142					
Hos oss blir det oppfattet som svært viktig å følge reglene		.641		-.224	-.245	.201		-.306	.266
Hos oss blir ingen særlig opprørt hvis reglene brytes		.621	.116	-.191	-.104	.139	.368	-.188	.186
Folk kan ignorere formelle prosedyrer og regler hvis det bidrar til å få jobben gjort		.571	.141	-.161			.131		
Ledelsen holder streng kontroll med arbeidet til de ansatte	.143	-.387	-.152		.172		.224		-.244
Folks oppfatning er at bedriftens suksess avhenger av høy kvalitet på arbeidet		.363		-.195	-.140	.177	.178	-.205	.291
Produktiviteten kunne blitt forbedret om arbeidet ble bedre organisert og planlagt	.132		.820	-.116	-.147				
Dårlig planlegging resulterer ofte i at man ikke når sine målsetninger			.748						
Tid og penger kunne blitt spart dersom arbeidet var bedre organisert	.237	.192	.687	-.204	-.236		.140	-.111	
Ting kunne blitt gjort mye mer effektivt hvis folk tok seg tid til å tenke seg om	.233		.678	-.141			.113	-.131	
Det finnes en klar oppfattning av hvor bedriften går	.329	.174	.157	-.863	-.423		.172	-.369	.243
Alle som jobber her er bevisst på bedriftens fremtidsplaner og retning	.355	.254	.190	-.823	-.341		.153	-.353	.151
Bedriftens fremtidige retning blir klart og tydelig kommunisert til alle	.301	.158	.118	-.732	-.370		.125	-.343	.300
Folk har en god forståelse av organisasjonens formål	.283	.191	.153	-.637	-.358		.116	-.388	.266
Folk har ikke en klar forståelse av hva som er bedriftens mål	.189	.181	.171	-.572	-.221		.274	-.165	
I denne organisasjonen tar man seg tid til å evaluere organisasjonens målsetninger	.393	.154	.192	-.525	-.491		.197	-.321	.331
Denne organisasjonen er stadig på jakt etter nye muligheter i markedet	.159			-.398	-.394	.195	.289	-.212	.309
Denne organisasjonen er svært fleksibel; den kan raskt endre prosedyrer for å møte nye vilkår, og problemer løses når de oppstår	.417		.213	-.396	-.704		.222	-.412	.270

Bedriften reagerer raskt når endringer er nødvendig	.365	.134	.133	-.359	-.674		.169	-.432	.246
Behov for å gjøre ting annerledes fanges raskt opp av ledelsen	.536	.139	.247	-.397	-.656			-.411	.236
Hos oss skjer endringer i måten ting gjøres på svært langsomt	-.251		-.160	.322	.632		-.260	.239	-.111
Støtte til utvikling av nye ideer er lett tilgjengelig	.461		.214	-.383	-.583	-.105	.143	-.449	.302
Ledelsen er ikke interessert i å prøve ut nye ideer	-.373	-.178	-.210	.529	.552		-.385	.291	-.136
Hos oss blir nye ideer gjerne akseptert	.473			-.479	-.550		.149	-.420	.257
Måten de ansatte jobber sammen på i denne organisasjonen endres gjerne hvis det bedrer prestasjonen	.389	.189	.118	-.348	-.524	.110	.287	-.385	.272
Måten denne organisasjonen gjør ting på har aldri forandret seg særlig mye	-.252	-.138	-.215	.458	.495		-.353	.198	
Denne organisasjonens målsetninger endres i takt med forandringer i miljøet	.251		.178	-.345	-.465		.147	-.247	.244
Folk i denne organisasjonen er alltid ute etter å se problemer fra nye vinkler	.261			-.290	-.453			-.280	.278
Toppledelsen foretrekker å holde seg til de etablerte, tradisjonelle måtene å gjøre ting på	-.253			.343	.425		-.266	.133	
Denne bedriften forsøker alltid å oppnå de høyeste kvalitetsstandardene	.283	.380		-.374	-.422	.294	.311	-.397	.328
Hvorvidt de ansatte jobber effektivt sammen, blir regelmessig diskutert	.142			-.206	-.399			-.209	.382
Arbeidsmetodene brukt i denne bedriften blir ofte diskutert				-.118	-.375				.119
Arbeidstempoet her er ganske avslappet		.136				.673	.180		.103
Folk er under sterkt press for å nå målsetninger	-.292		-.162	.164	.120	.617	-.193	.198	
Vanligvis er ikke folks arbeidsbelastning spesielt krevende	-.164		.121			.588	.150		
Ledelsen krever at folk jobber ekstremt hardt	-.310			.132	.164	.586	-.131	.292	
Det forventes for mye av folk i løpet av en dag	-.239			.114		.546	-.115	.273	-.123
Her legger ikke folk mer innsats i arbeidet sitt enn det de må	.258	.139	.219	-.216	-.198	.449	.336	-.343	.210
Folk er innstilt på å gjøre en ekstra innsats for å utføre en god jobb	.255	.177		-.210	-.267	.439	.220	-.364	
Her slipper folk unna med å gjøre så lite som mulig	.174	.197	.211	-.102	-.123	.396	.325	-.284	.278
Kundens behov er ikke ansett som topp prioritet hos oss	.236	.301	.190	-.285	-.307	.162	.690	-.355	.306

Det legges ikke mye vekt på måter å bedre kundeservicen	.335	.264	.145	-.414	-.424		.654	-.386	.301
Denne bedriften er treg til å reagere på kundenes behov	.341	.178	.288	-.275	-.353	.171	.620	-.372	.271
Denne organisasjonen er ganske innadrettet; man bryr seg ikke om hva som skjer i markedet	.185	.188		-.363	-.369	.136	.605	-.237	.252
Folk har ingen innvirkning i avgjørelser som påvirker arbeidet deres	.431			-.272			.446	-.307	.120
Det er viktig å dobbeltsjekke med sjefen før man tar en beslutning	.169	-.204					.276	-.126	
Denne bedriften forsøker å ta vare på sine ansatte	.510	.141	.104	-.463	-.358		.236	-.903	.256
Denne bedriften bryr seg om sine ansatte	.540	.151	.106	-.469	-.385		.225	-.873	.296
Denne bedriften prøver å handle rettferdig overfor sine ansatte	.537	.158	.151	-.407	-.368		.184	-.795	.294
Denne bedriften vier lite oppmerksomhet til ansattes interesser	.525		.125	-.456	-.272	-.154	.339	-.638	.236
Hos oss blir kvalitet tatt svært seriøst	.284	.435		-.359	-.355	.225	.312	-.467	.376
Hos oss ønsker folk alltid å prestere så godt de kan	.297	.115		-.273	-.160	.372	.192	-.444	
Folk er entusiastiske i forhold til jobben sin	.393	.140		-.249	-.251	.352	.231	-.444	.127
Denne bedriften har ikke noe særlig rykte for å levere produkter av topp kvalitet	.323	.262	.274	-.165	-.134		.310	-.325	
Folk har ingen anelse om hvorvidt de gjør en god jobb	.319			-.245	-.211		.311	-.420	.648
Måten folk gjør jobben sin på blir sjelden evaluert	.252	.161		-.323	-.217		.207	-.265	.639
Folks prestasjoner måles regelmessig	.121	.138		-.308	-.321			-.104	.627
Folk får som regel tilbakemelding i forhold til kvaliteten på det arbeidet de gjør	.402	.107		-.174	-.245		.178	-.365	.609
Det er generelt vanskelig for ansatte å vurdere kvaliteten på det de presterer	.221		.160	-.289	-.219		.283	-.338	.490

Extraction Method: Maximum Likelihood.
Rotation Method: Oblimin with Kaiser Normalization.